to the Humanitarian Health Digest—a quarterly bibliography of published peer-reviewed journal articles on humanitarian health. The Digest is compiled by the Johns Hopkins Center for Humanitarian Health and The Lancet. It includes one or two new commentaries on peer-reviewed articles cited in the Digest.

The objective of the Digest is to provide links to peer-reviewed articles on humanitarian health from a wide variety of journals in one place for ease of reference. Peer-reviewed articles will be searched systematically using the PubMed and Global Health (OVID) databases. Articles will mostly include primary research and systematic reviews. Humanitarian health will be divided into three broad categories: 1. Conflict and Forced Displacement; 2. Natural Disasters; and 3. Technological Disasters. The articles will be further divided into low- and middle-income countries and high-income countries.

Under each of these two sub-categories, articles will be subdivided into the following public health-related categories:

I. COMMUNICABLE DISEASE
II. NON-COMMUNICABLE DISEASE
III. REPRODUCTIVE, MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH
IV. NUTRITION AND FOOD SECURITY
V. WATER, SANITATION AND HYGIENE (WASH)
VI. MENTAL HEALTH, PSYCHOSOCIAL ISSUES, AND SUBSTANCE ABUSE
VII. HEALTH SYSTEMS
VIII. MULTI-CATEGORY

All featured articles from the Lancet family of journals will be free to read with registration on TheLancet.com. It is the Center for Humanitarian Health’s goal that other journals will follow suit to allow all peer-reviewed articles to be free to read so that humanitarian workers worldwide can learn from and apply lessons learned and conclusions immediately in the field to benefit persons affected by conflict, natural disasters and technological disasters.

We hope that you will learn and benefit from the articles presented in the Humanitarian Health Digest.

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During its 39th session in September 2018, one of ten commitments adopted by the UN Human Rights Council was a resolution calling on states to enhance investment in initiatives to eliminate preventable maternal mortality and to protect sexual and reproductive health and rights of women and girls in humanitarian settings (A/HRC/RES/39/13). One of the resolution’s key messages is the importance of addressing access barriers, poor quality care, and patterns of discrimination that contribute to negative pregnancy-related outcomes, all of which are exacerbated by humanitarian crises.

This resolution is noteworthy for many reasons. Among them, it recognizes that while there are large disparities in maternal mortality and morbidity rates across and within countries, women and girls in humanitarian settings face disproportionate risks. It also recognizes the importance of addressing access barriers, poor quality care, and patterns of discrimination that contribute to negative pregnancy-related outcomes, all of which are exacerbated by humanitarian crises.

In this quarter’s Digest, Botcher and colleagues report on maternal mortality that occurred in the July–August 2014 conflict in Gaza (a setting with relatively low maternal mortality burden), and for 10 months afterward. The authors triangulated data from medical records, death certificates, and investigation reports, and interviewed both health care providers and family members to examine causes of death and factors contributing to maternal mortality.

Four maternal deaths took place during the the 50-day conflict, and 14 during the remainder of the year. The stories of these 18 women place a human face on many of the issues noted in the Human Rights Council resolution, and highlight complexities in understanding and addressing barriers to quality maternal health care in humanitarian settings. Factors contributing to these maternal deaths included substandard care and referral mechanisms, neglect, poor communication between healthcare professionals and women or families, and low morale among clinicians. A few cases demonstrated direct impacts of the conflict on women’s health and ability to reach care, while most illustrated impacts of structural and social determinants that are not necessarily unique to humanitarian crises, but may have been exacerbated by the conflict and economic blockade.

Part of understanding the impact of conflict on health, is understanding how resource constraints and security challenges impact healthcare provider motivation and performance in humanitarian settings. Better understanding of these indirect impacts could help inform quality improvement strategies to ensure that all women, regardless of location, are able to access care free from discrimination, coercion and violence. Botcher and colleagues also documented high levels of distrust in the health system among families of women who died, which is not surprising and further reinforces studies in other settings that have shown that poor treatment during childbirth can be a greater deterrent to care seeking than distance or cost-barriers.

Together with recommendations outlined in a number of other articles in this Digest, further research on women’s experiences during pregnancy and childbirth in humanitarian settings is also needed to inform, and ideally improve, strategies to strengthen quality of maternity care and health sector accountability to crisis-affected populations.


2 See for example: Singh NS, et al. (PLoS One); and Ostby G, et al. (Demography).
It seems intuitive that conflict and war are bad for health. There is an extensive literature on the catastrophic impact of violent conflict on the health and well-being of individuals and communities and the death toll is high. The latest survey from the Institute for Strategic Studies says that conflict-related deaths amounted in 2017 alone to 14,000 deaths in Afghanistan, 17,000 in Yemen, and 39,000 in Syria. A new LSHTM study estimates the number of dead from the South Sudan conflict since 2013 to be a staggering 382,000.

Over time, the nature of war and the health risks associated with conflict have evolved and are becoming more intensified. The victims of such violence are also changing as health personnel and facilities are increasingly targeted, and conflicts such as civil wars become protracted, resistant to political mediation, and characterised by periods of relative calm alongside intense attacks.

Most statistics to date have comprised deaths resulting directly from the conflict and combat. But these numbers do not account for the deeper and broader ways that conflict and war devastate populations and individuals. Deaths from disease or illness caused indirectly—by, for example, the disruption of health care services and immunisations, or the lack of food, sanitation, or housing—are also considerable casualties of war. Some estimates suggest for every one direct death there are five indirect deaths. But no consensus has been established. What is known is that while armed conflict around the world is initiated and perpetuated by men, children and women bear disproportionate burdens.

Recent attempts to provide more specific estimates of the indirect consequences of conflict on child health have been incomplete. The Global Burden of Disease study has estimated that, since 1994, conflicts caused less than 0.4% of deaths of children younger than 5 years in Africa, raising questions about the role of conflict in the global epidemiology of child mortality. But those who work in the field feel this is an underestimate.

A study cited in this quarter’s Digest finds the indirect consequences of armed conflict on child mortality to be devastating and far greater than previous estimates. In addition, proximity to conflict increased risk for child mortality, especially for infants. The authors used a linked database called the Uppsala Conflict Data Program Georeferenced Events Dataset, which comprises births and child deaths from national demographic health surveys (DHS) that are then geospatially matched to areas for which they recorded 15,441 conflicts related to 968,444 conflict deaths. The authors then estimated the risk of mortality for babies (1 year of age and younger) and children (under 5 years of age), based on geographic proximity to the armed conflict and time after conflict resolution.

They analysed data over 20 years (1995–2015) in 35 countries across Africa. The focus is Africa because over the past 30 years, 75% of domestic armed conflicts have been on that continent. They find that proximity to a conflict was associated with a 7.7% increase in infant mortality risk. In other words, a risk of death in line with the risk associated with malnutrition. They report that on the entire continent, the number of infant deaths related to conflict from 1995 to 2015 was between 3.2 and 3.6 times the number of direct deaths from armed conflicts. The increased risk over the period of study amounted to between 3 and 3.5 million infant deaths, and 4.5 to 5 million under-5 child deaths.

Studies of this type are hard to do, and have limitations that should be taken into account when interpreting the findings, which are laid out well in a commentary by Emelda Okiro.
and Philip Ayieko linked to the new research article. Nevertheless, the study is a careful and in-depth analysis and establishes a methodology that can be extended to other regions of the world prone to or in active conflict.

This study makes a substantial contribution to understandings of the effect of conflict on mortality. It is important to document these effects for both policymakers and the public about the consequences of conflict, to help in documenting human rights violations, and to provide services to help the affected populations. The most obvious implication of these new estimates would seem to be to cease armed conflict. But recognising that is a longer-term goal, the study rightly suggests the need for more targeted humanitarian interventions—to protect children who are more vulnerable than previously understood.

Conflict and Forced Displacement

I. COMMUNICABLE DISEASE

LOW- AND MIDDLE-INCOME COUNTRIES


HIGH-INCOME COUNTRIES


II. NON-COMMUNICABLE DISEASE

LOW- AND MIDDLE-INCOME COUNTRIES


HIGH-INCOME COUNTRIES


III. REPRODUCTIVE, MATERNAL, NEWBORN, CHILD, AND ADOLESCENT HEALTH

LOW- AND MIDDLE-INCOME COUNTRIES


Conflict and Forced Displacement


HIGH-INCOME COUNTRIES


IV. NUTRITION AND FOOD SECURITY

LOW- AND MIDDLE-INCOME COUNTRIES


HIGH-INCOME COUNTRIES


V. WATER, SANITATION, AND HYGIENE (WASH)

LOW- AND MIDDLE-INCOME COUNTRIES


Conflict and Forced Displacement


VI. MENTAL HEALTH, PSYCHOSOCIAL ISSUES, AND SUBSTANCE ABUSE

LOW- AND MIDDLE-INCOME COUNTRIES


Conflict and Forced Displacement


HIGH-INCOME COUNTRIES


VII. HEALTH SYSTEMS

LOW- AND MIDDLE-INCOME COUNTRIES


HIGH-INCOME COUNTRIES


VIII. MULTI-CATEGORY

LOW- AND MIDDLE-INCOME COUNTRIES


I. COMMUNICABLE DISEASE

LOW- AND MIDDLE-INCOME COUNTRIES


HIGH-INCOME COUNTRIES

N/A.

II. NON-COMMUNICABLE DISEASE

LOW- AND MIDDLE-INCOME COUNTRIES

N/A.

HIGH-INCOME COUNTRIES


### III. REPRODUCTIVE, MATERNAL, NEWBORN, CHILD, AND ADOLESCENT HEALTH

#### LOW- AND MIDDLE-INCOME COUNTRIES


#### HIGH-INCOME COUNTRIES

N/A.

### IV. NUTRITION AND FOOD SECURITY

#### LOW- AND MIDDLE-INCOME COUNTRIES


#### HIGH-INCOME COUNTRIES

N/A.

### V. WATER, SANITATION, AND HYGIENE (WASH)

N/A.

### VI. MENTAL HEALTH, PSYCHOSOCIAL ISSUES, AND SUBSTANCE ABUSE

#### LOW- AND MIDDLE-INCOME COUNTRIES


**HIGH-INCOME COUNTRIES**


**VII. HEALTH SYSTEMS**

**LOW- AND MIDDLE-INCOME COUNTRIES**


**HIGH-INCOME COUNTRIES**

N/A.

**VIII. MULTI-CATEGORY**

**LOW- AND MIDDLE-INCOME COUNTRIES**


I. COMMUNICABLE DISEASE

N/A.

II. NON-COMMUNICABLE DISEASE

LOW- AND MIDDLE-INCOME COUNTRIES
N/A.

HIGH-INCOME COUNTRIES


III. REPRODUCTIVE, MATERNAL, NEWBORN, CHILD, AND ADOLESCENT HEALTH

IV. NUTRITION AND FOOD SECURITY

V. WATER, SANITATION, AND HYGIENE (WASH)

III.-V. N/A.

VI. MENTAL HEALTH, PSYCHOSOCIAL ISSUES, AND SUBSTANCE ABUSE

LOW- AND MIDDLE-INCOME COUNTRIES
N/A.

Technological Disasters
HIGH-INCOME COUNTRIES

VII. HEALTH SYSTEMS
N/A.

VIII. MULTI-CATEGORY
LOW- AND MIDDLE-INCOME COUNTRIES
N/A.

HIGH-INCOME COUNTRIES